

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1–13 (canceled)

Claim 14 (new). A switching mode power supply comprising:

a transformer,

a transistor operably coupled to switch current through a primary of the transformer, and

a control unit configured to control the switching of the transistor to generate current pulses through the transformer, the control unit further configured to receive a signal from a secondary side of the transformer and compare the signal with two threshold levels defining a range, the control unit configured to enable switching of the transistor in the case that a characteristic of the signal is outside the range in a first direction, and disabling switching of the transistor in the case that the characteristic of the signal is outside the range in a second direction.

Claim 15 (new). The switching mode power supply according to claim 14 wherein the characteristic of the signal is inversely related to power drawn by a load coupled to the secondary side, and wherein the control unit is further configured to enable switching when the characteristic of the signal is above a first threshold value, and disable

switching of the transistor in the case that the characteristic of the signal is below a second lower threshold value.

Claim 16 (new). The switching mode power supply according to claim 14 wherein the characteristic of the signal is directly related to the power drawn by a load coupled to the secondary side, and wherein the control unit is further configured to enable switching when the characteristic of the signal is above a first threshold value, and disable switching of the transistor in the case that the characteristic of the signal is below a second lower threshold value.

Claim 17 (new). The switching mode power supply according to claim 14 further comprising a blanking window definition circuit configured to prevent the control unit from disabling switching of the transistor in the case that the signal is below the second lower threshold value for less than a preset period of time.

Claim 18 (new). The switching mode power supply according to claim 14 further comprising a current limitation circuit arranged to receive a second signal indicative of the current through the primary of the transformer and to limit the current pulses if the second signal indicates that the current through the primary of the transformer is above a threshold value.

Claim 19 (new). The switching mode power supply according to claim 18 further comprising a memory device for storing data indicating whether the switching mode

power supply is operating in a first power supply mode, and arranged to enable the current limitation circuit only in the case that the power supply is operating in first power supply mode.

Claim 20 (new). The switching mode power supply according to claim 19, wherein the memory device comprises a flip flop.

Claim 21 (new). The switching mode power supply according to claim 20, wherein the current limitation circuit further comprises a logic gate coupled to receive a logic signal indicative of the power supply mode from the flip flop, the logic gate further coupled to receive an indication of whether the current through the primary of the transformer is above the threshold value.

Claim 22 (new). A switching mode power supply comprising:

- a transformer,

- a transistor coupled to control the current through a primary of the transformer,

- a control unit configured to control switching of the transistor to generate current pulses in the transformer,

- a memory device for storing data indicating whether the switching mode power supply is operating in a first power supply mode, and

- a current limitation circuit arranged to receive a first signal indicative of the current through the primary of the transformer and to limit the current pulses if the first signal indicates that the current is above a threshold value and the memory device

indicates that the switching mode power supply is operating in the first power supply mode.

Claim 23 (new). The switching mode power supply according to claim 22 wherein the control unit is a single integrated circuit logic device.

Claim 24 (new). The switching mode power supply according to claim 23 wherein the threshold value is on a value received at a pin input of the logic device.

Claim 25 (new). The switching mode power supply according to claim 23 wherein the threshold value has a value determined by an internal reference voltage of the integrated circuit.

Claim 26 (new). A method of operating a power supply, the power supply having a transformer, a transistor controlling the current through the primary of the transformer, and a control unit for controlling the switching of the transistor to generate current pulses in the transformer, the method including:

- a) receiving a signal from a secondary side of the transformer and comparing a characteristic of the signal with two threshold levels, the two threshold levels defining a range therebetween, and

- b) enabling switching of the transistor in the case that the characteristic of the signal is outside the range in a first direction, and disabling switching to the transistor in the case that the characteristic of the signal is outside the range in a second direction.

Claim 27 (new). The method according to claim 26, wherein the characteristic of the signal is inversely related to power drawn by a load coupled to the secondary side, and wherein step b) further comprises enabling switching when the characteristic of the signal is above a first threshold value, and disabling switching of the transistor in the case that the characteristic of the signal is below a second lower threshold value.

Claim 28 (new). The method according to claim 26, wherein the characteristic of the signal is directly related to the power drawn by a load coupled to the secondary side, and wherein step b) further comprises enabling switching when the characteristic of the signal is above a first threshold value, and disabling switching of the transistor in the case that the characteristic of the signal is below a second lower threshold value.

Claim 29 (new). The method according to claim 26, wherein the characteristic of the signal comprises a magnitude of the signal.

Claim 30 (new). The method according to claim 26, further comprising preventing the control unit from disabling switching of the transistor in the case that the signal is below the second lower threshold value for less than a preset period of time.

Claim 31 (new). The method according to claim 26, further comprising:

c) receiving a second signal indicative of the current through the primary of the transformer and limiting the current pulses if the second signal indicates that the current is above a threshold value.

Claim 32 (new). The switching mode power supply according to claim 31 further comprising performing step c) only in the case that the power supply is operating in a first power supply mode of a plurality of power supply modes.

Claim 33 (new). A method of operating a power supply having a transformer, a transistor controlling the current through a primary of the transformer, and a control unit for controlling the switching of the transistor to generate current pulses in the transformer, the method comprising:

a) receiving a signal indicative of the current through the primary of the transformer, and

b) limiting the current pulses if the signal indicates that the current is above a threshold value and if the power supply is operating in a first power supply mode of a plurality of power supply modes.